

REMARKS

Applicants respectfully request reconsideration of this application as amended. Claims 1-40 are pending in the application. Claims 1 and 21 have been amended. No claims have been added. Claims 2 and 22 have been canceled.

The Examiner objected to the drawings. More specifically, the Examiner stated that Figures 1 and 2A should be designated by a legend such as --Prior Art--. Applicants have included herein proposed drawing changes in form of red-inked originals. Applicants will send the drawings under separate cover to the draftsman.

The Examiner objected to the title saying that the title was not descriptive. The Examiner suggested a title. However, Applicants believe the suggested title is too narrow and has replaced the title with an alternative title. Applicants respectfully request the Examiner to accept the change to the title and withdraw the objection.

Applicants have amended the claims, particularly to overcome the Examiner's rejection of indefiniteness under 35 U.S.C. §112 and to more clearly distinguish the invention from the prior art cited. The Examiner initially rejected claims 1, 2, 21 and 22 under 35 U.S.C. §112, second paragraph. Accordingly, Applicants have amended claims 1 and 21 to particularly point out and distinctly claim, in full, clear, concise and exact terms, the subject matter which Applicants regard as his invention.

The Examiner objected to Claim 2 and 22 due to informalities. Applicants have canceled Claims 2 and 22. Therefore, the objection has been obviated.

The Examiner rejected Claim 1-2 and 21-22 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication Number 2001/0003544 A1 by Kajiwara et al (hereinafter "Kajiwara"). Applicants reserve the right to swear behind Kajiwara.

The Applicants respectfully disagree. Claim 1 sets forth the following:

A method comprising:
decomposing input data into a plurality of code-blocks;
assigning the plurality of code-blocks, on a code-block basis, to a plurality of MQ coders for coding the plurality of code-blocks in parallel so that the number of coefficients coded by each of the plurality of MQ coders is approximately the same, to the extent possible when assigning code-blocks on a code block basis.

(emphasis added)

As set forth above, Claim 1 as amended includes assigning a plurality of code blocks on a code block basis to multiple MQ coders for coding thereby in parallel, so that the number of color efficient coded by each of the plurality of MQ coders is the same to the extent possible when assigning code blocks on a code block basis to each of the plurality of MQ coders. Applicants respectfully submit that Kajiwara does not disclose this feature.

Kajiwara discloses the imaging processing apparatus that performs a color transform on image data to produce separate image components. Each of the components undergoes application of a discrete wavelet transform separately from each other. The coefficients that are generated as a result of performing the wavelet transform are then separately coded by binary arithmetic coding units. Thereafter, the coded coefficients are then buffered and then combined from the separate coding strings are then combined in a single output. More specifically, in Kajiwara, each of the binary arithmetic coding units receive all of the coefficients that the output from the wavelet transform unit that is applied to that image component. There is no discussion of balancing a number of coefficients that are sent to the binary arithmetic coding units. Each binary arithmetic coding unit is assigned to a specific wavelet transform unit and encodes all of the coefficients from the assigned wavelet transform unit. Therefore, if the number of coefficients generated by a specific wavelet transform unit is far greater than those of another, then the coding performed by its associated binary arithmetic coding unit will be far greater than

that of the others. Because no such balancing is performed, the present invention as claimed is not anticipated by Kajiwara.

The Examiner rejected Claims 3, 5, 7, 9, 11, 13, 15-20, 23, 25, 27, 29, 31, 33, and 35-40 under 35 U.S.C. §103(a) as being unpatentable over Kajiwara as applied to claims above, and further in view of U.S. Patent No. 6,332,043 B1 Ogata (hereinafter "Ogata").

The Applicants respectfully disagree. As set forth above, the present invention as claimed assigns code blocks on a code block basis to multiple MQ coders for coding thereby so that the number of coefficients that is coded by each of the multiple MQ coders is the same to the extent possible in view of the fact that code blocks are assigned in their entirety to the MQ-coders. Such feature is not shown in Kajiwara. Ogata does not overcome this deficiency.

Ogata discloses an encoding method that includes encoding data using a wavelet transform. Ogata does not disclose assigning code blocks for coding to multiple MQ coders on a code-block basis in such a way as to balance the number of coefficients coded by each of the MQ coders. Also, there is nothing in Kajiwara nor Ogata that indicates that a change in their teachings to provide for such balancing. Therefore, Applicants respectfully submit that the combination of Kajiwara and Ogata does not disclose all the limitations of the present invention as claimed, and thus, Applicants respectfully submit that the present invention as claimed is not obvious in view of Kajiwara and Ogata.

The Examiner rejected Claims 4, 6, 8, 10, 12, 14, 24, 26, 28, 30, 32, and 34 under 35 U.S.C. §103(a) as being unpatentable over Kajiwara and Ogata as applied to claims above, and further in view of U.S. Patent No. 6,486,981 of Shimura et al. (hereinafter "Shimura").

The Applicants respectfully disagree. As set forth above, the present invention as claimed assigns code blocks on a code block basis to multiple MQ coders for coding thereby so that the number of coefficients that is coded by each of the multiple MQ coders is as close to the

same possible in view of the fact that code blocks are assigned in their entirety to the MQ-coders. Such feature is not shown in Kajiwara nor Ogata. Shimura does not overcome this deficiency. Shimura does not disclose assigning code blocks for coding to multiple MQ coders on a code block basis in such a way as to balance the number of coefficients coded by each of the MQ coders. Also, there is nothing in Kajiwara, Ogata nor Shimura that indicates that a change in their teachings to provide for such balancing. Therefore, Applicants respectfully submit that the combination of Kajiwara, Ogata and Shimura does not disclose all the limitations as claimed as thus, Applicants respectfully submit that the present invention as claimed is not obvious in view of Kajiwara, Ogata and Shimura.

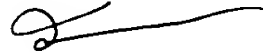
Accordingly, Applicants respectfully submit that the rejections under 35 U.S.C. §102 and §103 have been overcome by the amendments and the remarks and withdrawal of these rejections is respectfully requested. Applicants submit that Claims 1, 3-21 and 23-40 as amended are now in condition for allowance and such action is earnestly solicited.

Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

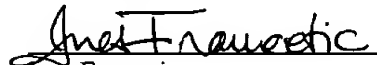
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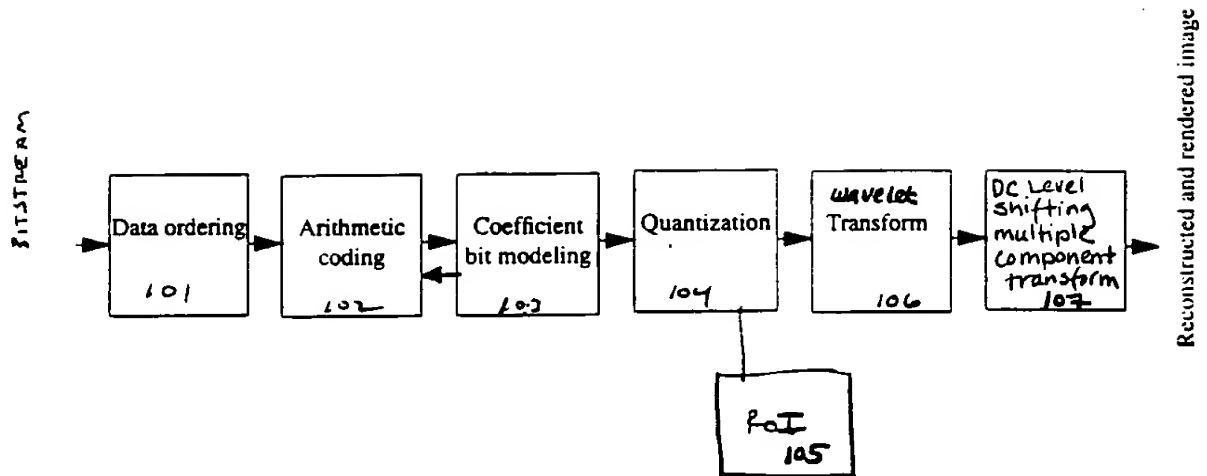


Figure 1 (Prior Art)



SP 0	SP 4	C 8	C 12	C 16	C 20	C 24	C 28
R 1	SP 5	C 9	C 13	C 17	C 21	C 25	C 29
R 2	SP 6	SP 10	SP 14	SP 18	C 22	C 26	C 30
SP 3	SP 7	R 11	R 15	SP 19	C 23	C 27	C 31
C 32	SP 36	SP 40	SP 44	SP 48	C 52	C 56	C 60
C 33	C 37	C 41	C 45	C 49	C 53	C 57	C 61
C 34	C 38	C 42	C 46	C 50	C 54	C 58	C 62
C 35	C 39	C 43	C 47	C 51	C 55	C 59	C 63

Figure 2A (Prior Art)